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June 28, 2006

VIA ELECTRONIC FILING

Marlene H. Dortch, Secretary
Federal Communications Commission
445 12th Street, S.W.
Room TW-B204
Washington, DC 20554

Re: Notice of Oral *Ex Parte* Communication,
WT Docket No. 04-296 – Review of the Emergency Alert System

Dear Madam Secretary:

In accordance with Section 1.1206 of the Commission's rules, 47 C.F.R. Section 1.1206, we hereby provide you with notice of an oral *ex parte* presentation in connection with the above-captioned proceeding. The meeting occurred on June 28, 2006 with the following:

Office of Commissioner McDowell: Angela E. Giancarlo, Acting Legal Advisor

The meeting was attended by the undersigned and Arthur L. Prest of Prest & Associates, on behalf of the Rural Cellular Association ("RCA").

Discussion in the meeting referred to RCA's Comments in response to the Commission's "Further Notice of Proposed Rulemaking" in this matter. RCA urges consideration of a concept that involves integration into the cellular handset of a supplemental reception capability so that subscribers that "opt-in" to the service may receive messages that are broadcast through the existing national weather alert radio network. Messages of importance to all would be receivable by all; messages of a local character such as severe weather alerts would be received from the National Weather Service ("NWS") station in nearest proximity to the cell phone user. Such a delivery system would be most effective if the wireless network would dynamically program the Specific Area Message Encoding ("SAME") code that corresponds to the area being sent an alert

by a local national weather station into the supplemental NWS receiver in the handset as that handset moves from cell to cell.

There was discussion of limitations of Short Messaging Service or "SMS" and of Cell Broadcast technology for EAS. SMS was not designed to provide point-to-multipoint broadcasts of EAS messages to all wireless subscribers. For any wide-scale use of SMS to deliver an emergency message there would be prolonged delays in reception of urgent messages by customers. As for cell broadcast there are assorted other obstacles including a possibility that EAS by cell broadcast would require the use of a patented technology with undetermined licensing obligations for carriers. See, for example, the attached material from the website of PCA, Inc. (which has no affiliation with RCA).

Before the Commission orders any actions by wireless carriers for the delivery of EAS messages RCA recommends establishment of a working group of government and industry representatives. The working group would study and reach consensus on EAS user requirements and a service description for EAS by means of wireless devices. Questions for consideration by the working group might follow the attached list of questions compiled by Mr. Prest.

Sincerely,

David L. Nace
Counsel for Rural Cellular Association

cc: Best Copy and Printing, Inc. (by email)

Wireless EAS User Requirements/Service Description Questions
(Art Prest on behalf of RCA June 13, 2006)

Government and Industry Consensus Required On A User Requirements/Service Description

Technical Questions:

1. What types of emergency messages must be conveyed?
2. Do roamers have to receive geographically specific locally generated EAS messages?
3. What should message format of content be (voice, text, video)?
4. Do EAS messages have to be delivered in multiple languages?
5. Do EAS messages have to be capable of providing alerts to the deaf and hard of hearing?
6. Should the subscriber be able to select which EAS messages they receive?
7. Is a discrete alert tone required for EAS messages?
8. Should there be different tones for different types of EAS messages?
9. Must EAS messages be received if a call is in progress?
10. Do EAS messages interrupt voice or data content?
11. Is a priority mechanism required for alert messages in the case of simultaneous alerts?
12. Does the receipt of an EAS message have to be confirmed?
13. Is there a requirement for message retries or re-transmission?
14. How would alerts be cancelled? Do alert cancellations have to be sent?
15. What is the maximum length of message (number of text characters or time)?
16. What level of geographic specificity is required?
    i. County?
    ii. Cell site coverage area?
    iii. Within 300 feet?
    iv. Is area dynamic depending on the type of alert?
17. How quickly must EAS messages be received after being sent?
18. How large a population must be covered at one time?
19. Do non-service initialized phones have to receive EAS messages?
20. What standard format will be used for the EAS messages?
21. Is there a periodic testing requirement? Does the subscriber see these "tests"?
22. What will the government format, interface and protocol be?

Policy Questions:

1. Which government agency will be responsible for managing a national EAS program?
2. Is delivery of EAS messages by CMRS carriers mandatory or optional?
3. Does the subscriber opt-in or opt-out?
4. Will there be some alerts that must be received by all wireless phones regardless whether the subscriber opted-in or not?
5. Who is allowed to generate EAS messages?
6. How would the government prevent fraudulent messages from being delivered to the wireless carrier?
7. How is liability protection provided to the wireless carrier?
8. How is cost recovery for wireless carriers provided?

Rural Cellular Association EAS Issues

(Art Prest, June 2006)

Issues Regarding Dissemination of Emergency Alert Messages Using Cell Broadcast

1. Cell Broadcast technologies cap the number of transmittable characters (93 for GSM and 256 for CDMA) thereby cutting short emergency alert messages and preventing the transmission of instructions or other useful information in an emergency. RCA believes that short text based messaging is not appropriate for disseminating EAS messages such as Presidential emergency messages or tsunami, tornado or other types of local disasters. The amount of meaningful useful content that can be contained in a typical CDMA and GSM Cell Broadcast message (see Attachment A for a comparison of what portion of a NOAA audio test message would be transmitted using various technologies for text messaging) is not sufficient to inform people as to what to do in an emergency situation and is likely to lead to unintended consequences including causing recipients to immediately make calls on their wireless phones to find out what is happening. Such calls will lead to severe network blockages in which no one will be able to make a call similar to what happened on 9/11.

2. Although Cell Broadcast can provide geographic specific delivery of emergency alert messages and is less affected by the capacity limitations of wireless networks, there are drawbacks to Cell Broadcast as well:

   a. In addition to it being complex and costly, Cell Broadcast text messaging has never been deployed commercially in the United States on GSM or CDMA networks.
   b. In addition to implementation issues, Cell Broadcast requires significant investment in network upgrades plus the change out of all CDMA handsets and most GSM handsets and significant ongoing involvement of the wireless carrier to ensure that emergency alert messages are delivered to the correct geographic area.
   c. There is no Cell Broadcast solution for iDEN,
   d. There are also liability issues for the wireless carrier if such messages are not delivered to the correct geographic area.
   e. A recent ETSI analysis of Cell Broadcast Service in Europe revealed that "problems with high power drain and difficulty in providing a friendly MMI (Man Machine Interface) have limited MS (Mobile Station) development." As a result of the "considerable drain on the battery life ..... MS's are normally shipped with the Cell Broadcast feature switched off."

f. In addition EAS messages sent to GSM wireless phones using Cell Broadcast technology cannot be received if the phone is in use at the time of the message.
g. Cell Broadcast EAS messages, if received, are not differentiated from other messages such as a stock quotes. There is no distinctive indication that the incoming message might be critical to one's life.
h. According to Cingular, roamers would be unable to receive cell broadcast alerts. Because there currently are no message identifiers or defined categories relating to emergency notifications via cell broadcast, there is no standardized method to identify an emergency notification. Thus, roamers in an alert area would not necessarily receive emergency messages because carriers may assign message categories differently.
i. According to Cingular there are network issues with using cell broadcast. Many carriers have assigned the cell broadcast channels for signaling traffic support: call setup; authentication; network registration; and SMS service. Reassigning these channels for cell broadcast would reduce capacity by 12.5% to 25% for normal voice and text services. Therefore the use of cell broadcast for EAS raises serious capacity issues. Such capacity issues raise serious public interest concerns, including impeding the general public from accessing the wireless network during times of emergency.
j. According to Ericsson: Cell Broadcast Service has little consumer appeal. With its low bit-rate transmission capability, Cell Broadcast Service does not offer future multimedia capabilities. In fact, Cell Broadcast Service offers very little consumer benefit, beyond its potential use for wireless EAS. Moreover, even its use for wireless EAS is problematic. Under the current Cell Broadcast Service protocol, a handset must be set to always listen for broadcasts. This constitutes a substantial drain on the handset's battery resources. Consumers must affirmatively activate Cell Broadcast Service and many may never do so, or, after suffering substantially decreased battery life when it is on, turn it off. Consumers view Cell Broadcast Service as a nuisance much more than as a valuable communication tool. Consequently, consumer adoption of this technology is likely to be minimal, especially since consumers do not gain from Cell Broadcast Service synergies with any other consumer services.
k. According to one source the infrastructure vendors do no not plan to support Cell Broadcast most likely because they are focusing their resources on next generation solutions such as Multimedia Broadcast/Multicast Service ("MBMS").

Attachment A:

NOAA NWS Test Message

Entire Audio Message:

This is a test of the NOAA radio warning device. During potentially dangerous weather situations, specially built weather radios will be automatically activated to warn of the impending hazards. Tests of these radios and the warning system will be conducted by the National Weather Service every Wednesday between 11 AM and Noon. Reception of this broadcast, and the warning alarm, will vary at any given location. This variability, normally more noticeable at greater distances from the transmitter will occur even though you are using a good quality receiver in perfectly good working order. To provide the most consistent warning service possible, the warning alarm will be activated only for warnings and selected watches affecting the listening area.

STATS:
39 seconds of audio
122 words
661 characters
782 characters including spaces

---

160 characters and spaces (typical CDMA or GSM SMS text message limit[1]):

This is a test of the NOAA radio warning device. During potentially dangerous weather situations, specially built weather radios will be automatically activated

93 characters and spaces (GSM Cell Broadcast message limit):

This is a test of the NOAA radio warning device. During potentially dangerous weather situati

256 characters and spaces (CDMA Cell Broadcast message limit):

This is a test of the NOAA radio warning device. During potentially dangerous weather situations, specially built weather radios will be automatically activated to warn of the impending hazards. Tests of these radios and the warning system will be conducte

465 characters and spaces (GSM "concatenated" Cell Broadcast message limit):

According to ETSI, GSM Cell Broadcast capacity provides 93 message characters including spaces. However five groups (N.B., GSM standards say fifteen but ETSI recommends no more than five) can be concatenated and sent thus increasing the total message length to 465 characters. These messages can only be received by a mobile that is turned on and not in use (N.B., also true for CDMA Cell Broadcast), and it would take about 30 seconds to send all 465 characters.

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[1] Many wireless carriers limit text messages to 160 characters and spaces including the "from". Thus this EAS SMA text message from "NWS" would look like this: This is a test of the NOAA radio warning device. During potentially dangerous weather situations, specially built weather radios will be automatically activa

RCA

NOAA NWS Test Message

Entire 39 Second 782 Character Audi Message

This is a test of the NOAA radio warning device. During potentially dangerous weather situations, specially built weather radios will be automatically activated to warn of the impending hazards. Tests of these radios and the warning system will be conducted by the National Weather Service every Wednesday between 11 AM and Noon. Reception of this broadcast, and the warning alarm, will vary at any given location. This variability, normally more noticeable at greater distances from the transmitter will occur even though you are using a good quality receiver in perfectly good working order. To provide the most consistent warning service possible, the warning alarm will be activated only for warnings and selected watches affecting the listening area.

160 characters and spaces (typical CDMA or GSM SMS text message limit):

This is a test of the NOAA radio warning device. During potentially dangerous weather situations, specially built weather radios will be automatically activated

93 characters and spaces (GSM Cell Broadcast text message limit):

This is a test of the NOAA radio warning device. During potentially dangerous weather situati

RCA

Benefits of NOAA Public Alert Radio Proposal

- Message length is unlimited because EAS messages are audio based and the message is essentially a government radio broadcast that is being received by a radio receiver integrated into a wireless phone
- NOAA Public Alert radio broadcasts cover 97% of the population of the entire United States including Guam, Puerto Rico, and the Marianna Islands
- The audio message is not being transmitted through the wireless network thus avoiding bandwidth limitations of wireless networks
- Wireless carriers are not responsible for disseminating EAS messages
- By using SAME codes, EAS messages can be delivered to very discrete geographic areas (almost 9,000 geographic specific areas per state are possible). At the request of government entities, cell sites having discrete SAME codes could be built at critical state and federal government locations such as the Capitol, Pentagon, nuclear power plants, airports etc.
- Unlike Cell Broadcast technology where there is a significant difference in what is available for GSM technology versus CDMA technology, such an approach is technologically neutral
- According to a recent Consumer Electronics Association survey, 65% of the population surveyed are interested in owning portable Public Alert radio capability. It is believed that such interest would motivate subscribers to buy new handsets that include NOAA Public Alert radios

Community Alerting System

NEW

Download the CAS Presentation from the 4G NABNET Conference in Kansas City 4/17/02

Concept

The Community Alerting System (CAS) broadcasts emergency warning messages via wireless networks using designated zones/cell sites, and enhances Emergency Operations Center (EOC) effectiveness without increasing EOC responsibility or impacting the wireless infrastructure.

The CAS is based on a patented method and system for delivering emergency warnings via existing cellular networks

Typical System Flow

- When emergency situation arises. the appropriate authority (e.g. The National Weather Service) notifies the EOC
- The necessary warning level is determined by the city/county EOC
- Those areas in immediate danger/path of danger are located on a video map utilizing standard mapping software
- The EOC team, utilizing a specialized mapping interface. designates wireless zones in the threatened areas
- Emergency warning triggers are sent to specific wireless switches which send commands to cell site(s) in the designated zone These cell site(s) broadcast the warning messages
- ALL fixed/mounted receivers and ALL mobile receiver currently in the designated zones will receive the warning messages and produce the warning alarms

Typical Applications

- Nuclear incidents
- Tornado/Severe Weather

- Flash Floods
- Chemical Spills
- Terrorism Attacks

Why: Who Benefits

- General Public
- EOC
- Law Enforcement Agencies
- Government Alerting Authorities

Probable Users

- Public
- Schools
- Dormitories
- Hospitals
- Institutions
- Office Buildings
- Nurseries
- Manufacturing Plant

Overview | Benefits | Patent Information | PCA, Inc. Website

Community Alerting System

Intellectual Property and Licensing

Products and services presented on this website are protected by the United States Patent No. 6,112,075 - *Method of communicating emergency warnings through an existing cellular communication network, and system for communicating such warnings*, which was issued on August 29, 2000.

PCA Information Systems Inc. is owner by assignment of all rights to this patented methodology.

The sale/use of these products and services are subject to PCA license or royalty fees. Licenses are available on a maket-by-market basis to vendors, communities, and service providers for the purposes of providing community alerting/notification services.

- Annual non-exclusive licenses are offered on a market-by-market basis.
- Fees vary based on population served in each market.
- Exclusive licenses are available in some markets.
- PCA provides consulting and assistance with system configuration, hardware/software issues, and implementation.

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